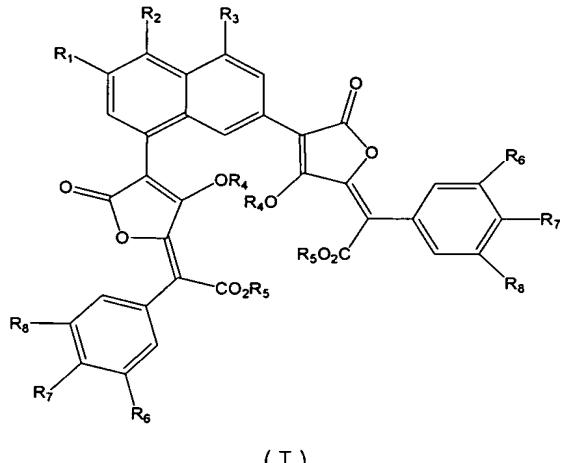


CLAIMS

1. Compound corresponding to the following formula (I) :



in which:

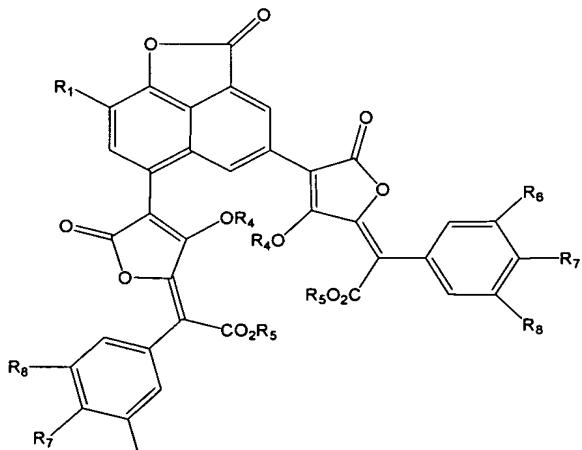
- R_1 , R_6 , R_7 and R_8 , which are identical or different, represent H, -OH or $-OR_9$;
- R_2 represents H, -OH or $-OR_9$; R_3 represents H, R_9 , $-CO_2R_9$ or $-CO-NHR_{10}$; or R_2 and R_3 form together $-O-CO-$;
- R_4 and R_5 , which are identical or different, represent H or R_9 ;
- R_9 represents a linear or branched alkyl group containing from 1 to 20 carbon atoms;
- R_{10} represents R_9 or a group $-(CH_2)_a-NH-(CH_2)_b-NH_2$, with a and b , which are identical or different, being integers ranging from 2 to 4;

and the salts of these compounds;

with the exception:

- of the compound for which R₂ and R₃ form together a group -OCO-, R₄, R₅, R₆ and R₈ represent H, R₁ and R₇ represent -OH and the disalts of potassium corresponding to this compound;
- of the compound in which R₂ and R₃ form together a group -O-CO-, R₁ and R₇ represent -OCH₃, R₄ and R₅ represent -CH₃ and R₆ and R₈ represent H;
- of the compound in which R₁, R₂ and R₇ represent -O-CH₃, R₃ represents -CO₂CH₃, R₄ and R₅ represent CH₃ and R₆ and R₈ represent H.

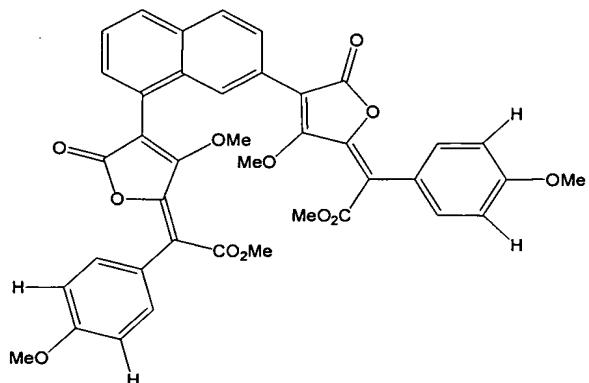
2. Compound according to Claim 1, for which R₂ and R₃ form together a group -O-CO-, the said compound corresponding to the following formula (II):



(II)

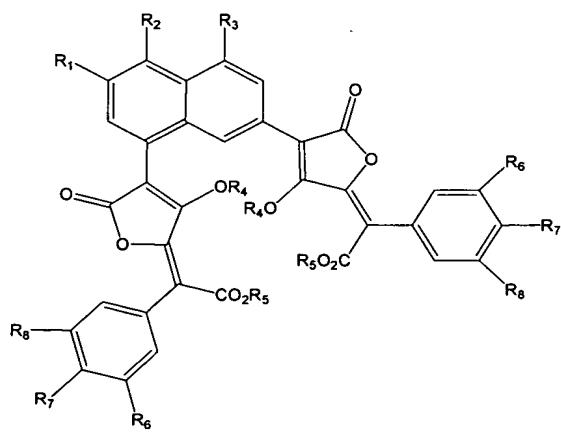
R_1 , R_4 , R_5 , R_6 , R_7 and R_8 having the same definition as that given in Claim 1.

3. Compound corresponding to the following formula (III):



(III)

4. Method for preparing a compound of the following formula (I):



(I)

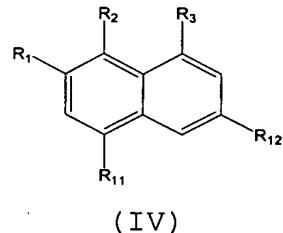
in which:

- R_1 , R_6 , R_7 and R_8 , which are identical or different, represent H, -OH or $-OR_9$;
- R_2 represents H, -OH or $-OR_9$; R_3 represents H, R_9 , $-CO_2R_9$ or $-CO-NHR_{10}$; or R_2 and R_3 form together $-O-CO-$;
- R_4 and R_5 , which are identical or different, represent H or R_9 ;
- R_9 represents a linear or branched alkyl group containing from 1 to 20 carbon atoms;
- R_{10} represents R_9 or a group $-(CH_2)_a-NH-(CH_2)_b-NH_2$, with a and b , which are identical or different, being integers ranging from 2 to 4;

and the salts of these compounds,

the said method comprising successively:

- a step consisting in reacting a compound of the following formula (IV):



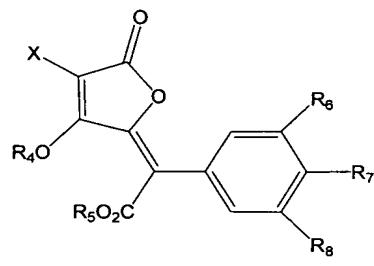
in which:

- R_1 , R_2 and R_3 have the same definition as that

given in Claim 1;

- R_{11} and R_{12} independently represent $-B(OR_{13})(OR_{14})$ or $-Sn(R_{15})_3$;
- R_{13} and R_{14} , which are identical or different, represent H or an alkyl group of 1 to 7 carbon atoms or R_{13} and R_{14} form together a linear or branched alkylene group;
- R_{15} represents a methyl or butyl group,

with a compound of the following formula (V) :

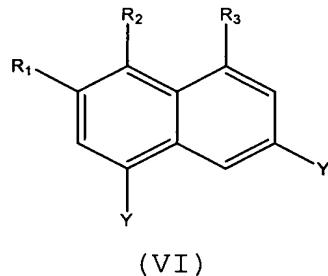


in which:

- R_4 , R_5 , R_6 , R_7 and R_8 correspond to the same definition as that given in Claim 1;
- X represents a leaving group,

the said reaction being carried out in the presence of a base and a catalyst based on platinum or palladium; and

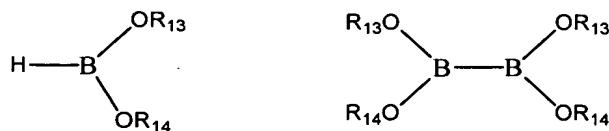
- optionally, a step of treatment intended to obtain a salt corresponding to the compound of formula (I).
5. Method of preparation according to Claim 4, in which the platinum-based catalyst is dichlorobis(triphenylphosphine)palladium.
6. Method of preparation according to Claim 4 or 5, in which the intermediate compound (IV), with R₁₁ and R₁₂ representing -B(OR₁₃)(OR₁₄), is prepared by reacting a naphthalene-derived compound of formula (VI):



in which:

- R₁, R₂ and R₃ have the same definition as that given in Claim 1;
- the Y's, which are identical or different, represent leaving groups;

with a boron compound corresponding to one of the following formulae:

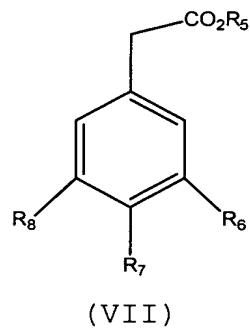


R_{13} and R_{14} having the same meaning as that given in Claim 4,

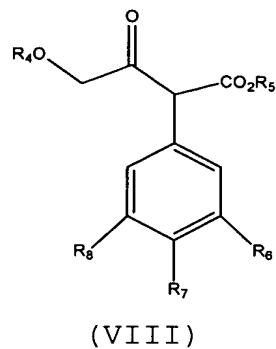
the said reaction being carried out in the presence of a base and a platinum- or palladium-based catalyst.

7. Method of preparation according to any one of Claims 4 to 6, in which the intermediate compound (V) is prepared by the following succession of steps:

- a) reaction of a phenyl acetate of the following formula (VII):

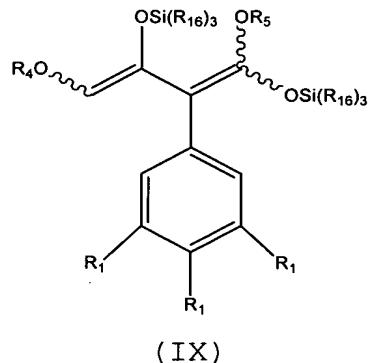


R_5 , R_6 , R_7 and R_8 having the same definition as that given in Claim 1, in a basic medium, with an alkyl α -alkoxyacetate of formula $R_4O-CH_2-CO-OAlk$, R_4 corresponding to the same definition as that given in Claim 1, the Alk group being a linear or branched alkyl group containing from 1 to 20 carbon atoms, at the end of which a compound of the following formula (VIII) is obtained:

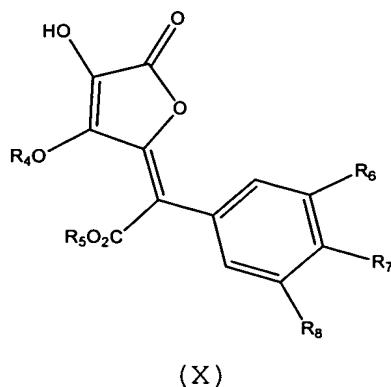


(VIII)

b) reaction of the compound (VIII), in a basic medium, with a silylated compound of formula (R₁₆)₃SiHal, R₁₆ being a linear or branched alkyl group containing from 1 to 4 carbon atoms, Hal being a halogen group such as F, Cl, Br, I, at the end of which a disilylated compound of the formula (IX) is obtained:

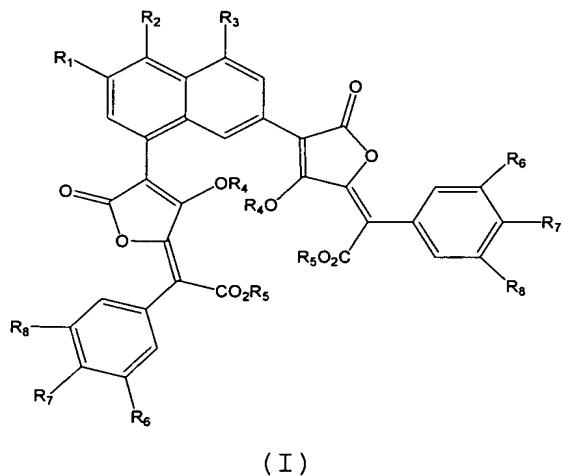


c) cyclization reaction of the compound (IX) with oxalyl chloride (ClCO)₂, at the end of which the compound of formula (X) is obtained:



d) reaction of the compound (X) with a reagent capable of forming, by reaction with the -OH of the lactone ring, a leaving group X, at the end of which the compound of formula (V) is obtained.

8. Antioxidant agent of the following formula (I):



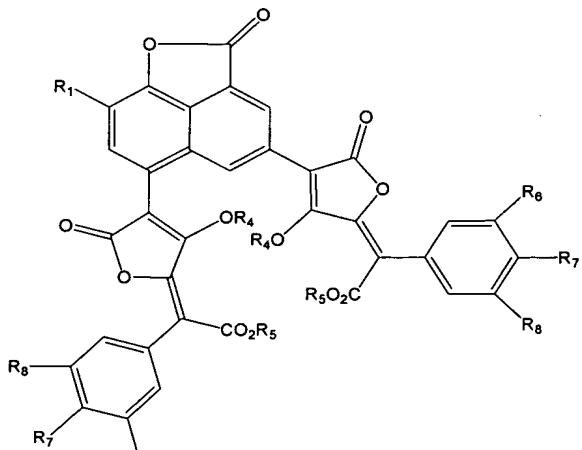
in which

- R_1 , R_6 , R_7 and R_8 , which are identical or different, represent H, -OH or $-OR_9$;
- R_2 represents H, -OH or $-OR_9$;

- R_3 represents H, R_9 , $-CO_2R_9$ or $-CO-NHR_{10}$;
- or
- R_2 and R_3 form together $-O-CO-$;
- R_4 and R_5 , which are identical or different, represent H or R_9 ;
- R_9 represents a linear or branched alkyl group containing from 1 to 20 carbon atoms;
- R_{10} represents R_9 or a group $-(CH_2)_a-NH-(CH_2)_b-NH_2$, with a and b, which are identical or different, being integers ranging from 2 to 4;

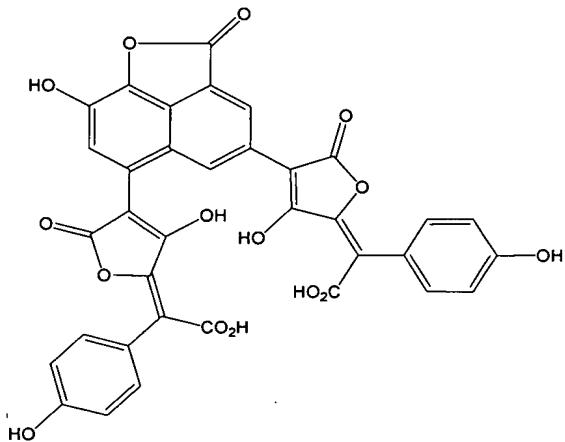
and the salts thereof.

9. Antioxidant agent according to Claim 8, for which R_2 and R_3 form together a group $-O-CO-$, corresponding to the following formula (II):



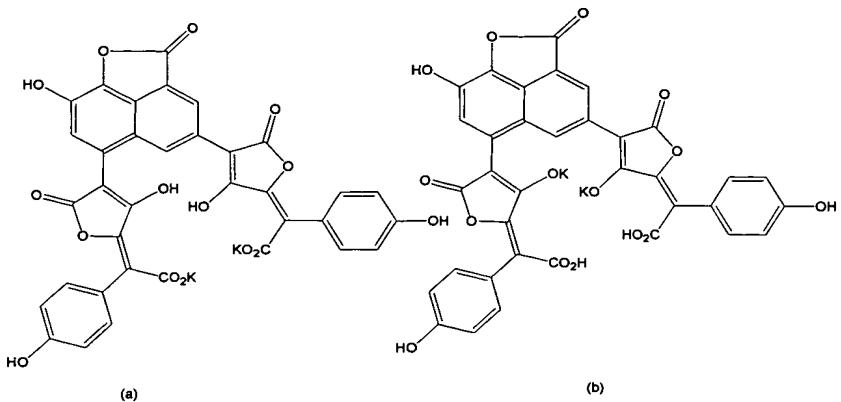
R₁, R₄, R₅, R₆, R₇ and R₈ having the same definition as that given in Claim 8.

10. Antioxidant agent according to Claim 8, in which R₄, R₅, R₆ and R₈ correspond to a hydrogen atom, R₁ and R₇ represent -OH, the said compound corresponding to the following formula (XI):



(XI)

11. Antioxidant agent according to Claim 8, corresponding to the dipotassium salt of the compound of formula (XI) of Claim 10, the said disalt existing in two forms, (a) and (b) corresponding to the following formula (XII):



(XII)

12. Pharmaceutical composition comprising at least one antioxidant agent according to any one of Claims 8 to 11 and a pharmaceutically acceptable vehicle.
 13. Cosmetic composition comprising at least one antioxidant agent according to any one of Claims 8 to 11.
 14. Food composition comprising at least one antioxidant agent according to any one of Claims 8 to 11.
 15. Use of an antioxidant agent as defined in Claims 8 to 11 for the manufacture of a pharmaceutical composition intended for the treatment of inflammatory diseases.
 16. Use of an antioxidant agent as defined in Claims 8 to 11 for the manufacture of a pharmaceutical composition intended for the treatment of a living organism exposed to ionizing radiation inducing the production of free radicals.

17. Use of an antioxidant agent as defined in Claims 8 to 11 for the manufacture of a pharmaceutical composition intended for inhibiting the side effects of a medicament inducing the production of free radicals.